



# Illinois Department of Transportation

## Memorandum

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To: ALL BRIDGE DESIGNERS 99.2

From: Ralph E. Anderson *Ralph E. Anderson*

Subject: Integral Abutment Base Sheets; Future Wearing Surface

Date: April 30, 1999

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This bridge memorandum supersedes previously issued Bridge Memoranda 97.10 and 98.2. Bridge Memorandum 97.10 contained integral abutment base sheets for all structure types. All of these base sheets, with the exception of those pertaining specifically to PPCI-beam and Bulb-T structures, have been incorporated into the Bridge Manual and CADD Manual with the issuance of the Bridge Manual revisions dated April 30, 1999. The integral base sheets for PPCI-beam and Bulb-T structures are included herein. They represent our preferred details which will be available in electronic format with the next revision of the Prestressed Concrete Manual.

Bridge Memorandum 98.2 included a revised concrete slab design chart to account for an increase in future wearing surface to  $2.4 \text{ kN/m}^2$  (50 lbs./sq. ft.). This chart has been incorporated into the Bridge Manual with the revisions dated April 30, 1999. Please note that the Prestressed Concrete I-beam and Bulb-T design charts found in the Prestressed Concrete Manual have not been revised and can be affected by as much as 15%. The Prestressed Concrete Manual will be updated in the future to account for the increase in future wearing surface.

KLR/bb16755

DATE	TIME	LOCATION	UNIT	TYPE
DATE	TIME	LOCATION	UNIT	TYPE
SHEET NO.		SHEETS		



\*20 bar = 850

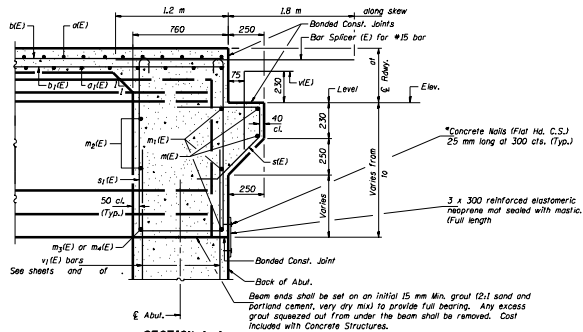


*Equivalent rolled angle with stiffeners  
will be allowed in lieu of welded plates.*

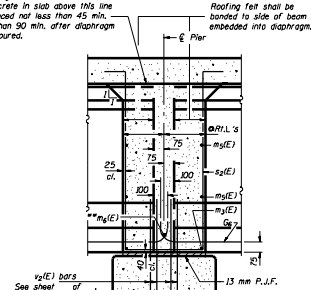
DESIGNED	29
CHECKED	EXAMINED
DRAWN	DESIGN OF BRIDGE DECK
CHECKED	<input type="checkbox"/> OK <input type="checkbox"/> NO <input type="checkbox"/> NO

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DESIGN NO.	DATE	BY	CHECKED	IN CHARGE



Pour diaphragm flush with baffle, of  
slab. Concrete in slab above this line  
shall be placed not less than 45 min.  
nor more than 90 min. after diaphragm  
has been poured.



Notes:  
See sheet of for location of Sections A-A and B-B.  
All dimensions are in millimeters (mm) except as shown.

DESIGNED	IN
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	DESIGNED BY

PLAN AT PIER  
(Showing bearing pad and P.J.F. details)

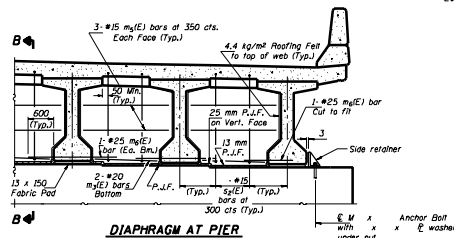
DATE	NAME	ADDRESS	PHONE	TELETYPE
DATE	NAME	ADDRESS	PHONE	TELETYPE
DATE	NAME	ADDRESS	PHONE	TELETYPE

SHEET NO. \_\_\_\_\_

SHEETS \_\_\_\_\_

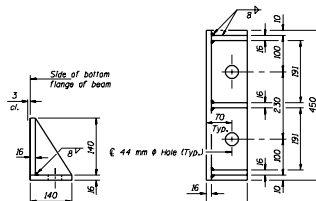
**MIN. BAR. LAP**

#20 Dgr = 850



**DIAPHRAGM AT PIER**

Reinforcement bars in diaphragm are lapped with superstructure on  
sheet of .  
Concrete in diaphragm is included with Concrete Superstructure  
on sheet of  
For details of bars  $s(E)$ ,  $s(E)$  and  $s(E)$  see sheet of  
The  $s(E)$ ,  $s(E)$  and  $s(E)$  bars shall be placed parallel to the beams.  
Spacing for these bars shall be at right angles to the beams.  
See sheet of for Sections A-A and B-B.  
Cost of 4.4 kg/m<sup>2</sup> roofing felt is included with Concrete Superstructure.  
All dimensions are in millimeters (mm) except as noted.  
The side rebar shall be galvanized after shop fabrication according  
to ASTM A 108 and ASTM A 360. Cost of side rebar and anchor  
bolts shall be included with Concrete Structures.  
See sheet of for anchor bolt details.



### **SIDE RETAINER**

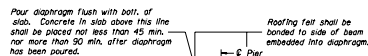
*Equivalent rolled angle with stiffeners  
will be allowed in lieu of welded plates.*

DESIGNED	24
CHECKED	EXAMINED
DRAWN	INSECT OF BLOOD SEED
CHECKED	PASSED
	CHINA IN CHINA AND CHINA

DATE	TIME	NAME	UNIT	TYPE
01/01/01	10:00	JOHN	101	101
01/01/01	10:00	JOHN	101	101
01/01/01	10:00	JOHN	101	101

SHEET NO. \_\_\_\_\_

SHEETS \_\_\_\_\_



Reinforcement shall be bent up 45° and not less than 45 min. on 90 min. after diaphragm cured.

Roofing felt shall be bonded to side of beam embedded into diaphragm.

See sheet of .

\*\*Tightly fasten the #25 bars together with 3.8 mm wire ties.

**SECTION B-B**  
Dimensions along E of beam, except as shown

Notes:  
See sheet of for location of Sections A-A and B-B.  
All dimensions are in millimeters (mm) except as shown.

DESIGNED	24
CHECKED	EXAMINED
DRAWN	DEPUTY OF BRIDGE DESIGN
CHECKED	PASSED
	CONTROLLED BY BRIDGE DESIGN

**PLAN AT PIER**  
(Showing bearing pad and PJF details)

UNIT NO.	DATE	NAME	AGE	SEX
UNIT NO.	DATE	NAME	AGE	SEX
UNIT NO.	DATE	NAME	AGE	SEX

SHEET NO. \_\_\_\_\_

SHEETS \_\_\_\_\_



**DIAPHRAGM AT PIER**

**SIDE RETAINER**

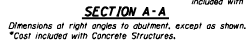
*Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.*

DESIGNED	19
CHECKED	EXAMINED
DRAWN	SIGNED BY PROJECT DESIGNER
SCALE	

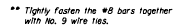
DATE	NAME	ADDRESS	CITY	STATE
DATE	NAME	ADDRESS	CITY	STATE
DATE	NAME	ADDRESS	CITY	STATE

SHEET NO. \_\_\_\_\_

SHEETS \_\_\_\_\_



Roofing felt shall be bonded to side of beam embedded into diaphragm.



Dimensions along  $\xi$  of beam, except as shown.

Note:  
See sheet of for location of Sections A-A and B-B.

**PLAN AT PIER**  
(Showing bearing pad and PJF details)

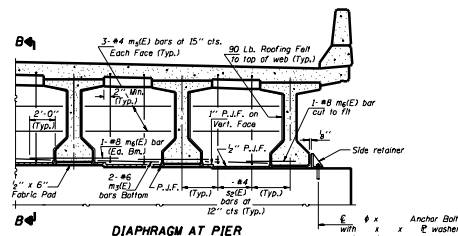
UNIT NO.	DATE	NAME	AGE	SEX
UNIT NO.	DATE	NAME	AGE	SEX
UNIT NO.	DATE	NAME	AGE	SEX

SHEET NO. \_\_\_\_\_

SHEETS \_\_\_\_\_

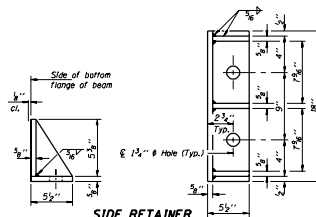
**MIN. BAR LAP**

#6 DIT = 2'-9"



**DIAPHRAGM AT PIER**

Notes:  
Reinforcement bars in diaphragm are billed with superstructure on sheet of \_\_\_\_\_  
Concrete in diaphragm is included with Concrete Superstructure on sheet of \_\_\_\_\_  
For details of bars s1E1, s1E2 and s1E3 see sheet of \_\_\_\_\_  
The s1E1, s1E2 and s1E3 bars shall be placed parallel to the beams.  
Spacing for these bars shall be at right angles to the beams.  
See sheet of \_\_\_\_\_ for Sections A-A and B-B.  
Cast of 30 lb. roofing felt is included with Concrete Superstructure.  
The slide retainer shall be guaranteed after shop fabrication according to ASTM A 36 and ASTM A 365. Cost of side retainer and anchor bolts shall be included with Concrete Structures.  
See sheet of \_\_\_\_\_ for anchor bolt details.



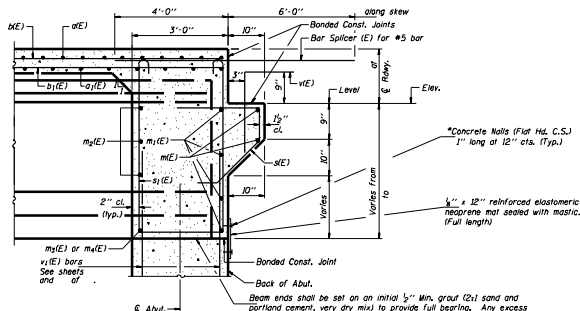
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

DESIGNED	19
CHECKED	EXAMINED
DRAWN	DIRECTOR OF BPOZ (S3)
APPROVED	PASSED



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

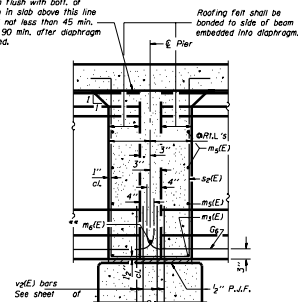
SHEET NO.	
SHEETS	



**SECTION A-A**

Dimensions at right angles to abutment, except as shown.  
\*Cast Included with Concrete Structures.

Pour diaphragm flush with bot. of  
slab. Concrete in slab above this line  
shall be placed not less than 45 min.  
nor more than 90 min. after diaphragm  
has been poured.



**SECTION B-B**

Dimensions along E of beam, except as shown.

\*\* Tightly fasten the #8 bars together  
with No. 9 wire ties.

Note:  
See sheet of for location of Sections A-A and B-B.

DESIGNED	1/4"
CHECKED	EXAMINED
DRAWN	DRAWN BY
CHECKED	APPROVED

**PLAN AT PIER**  
(Showing bearing post and P.L.F. details)